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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/967,080	09/28/2001	D. Scott Lineback	876P142	7616

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EXAMINER

PRATT, HELEN F

ART UNIT	PAPER NUMBER
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1761

DATE MAILED: 09/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/967,080

Applicant(s)

LINEBACK ET AL.

Examiner

Helen F. Pratt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 6) ☐ Other: _____

DETAILED ACTION

INFORMATION DISCLOSURE FORM

On page 1 of the IDS, no reference was found to 3,801,717, and on page 2, the reference to Steven Nagy et al. was not submitted. Clarification is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Black, Jr. et al. (Black et al.) (5,403,604) in view of Lawhon et al. (4,643,902) and Dechow et al. (4,522,836) and Puri (4,439,458) .

Black et al. '458 disclose a process of removing sugar from juices, which can be single strength juice, using a nanofiltration membrane to divert the initial juice flow to make a high and low sugar containing juice fraction (abstract). The initial juice flow is separated into two portions because the fruit juice is first passed through an ultrafiltration membrane to remove pulp, cloud and oils. The permeate is then passed through nanofiltration to remove fruit juice sugars (col. 2, lines 15-15). The reference discloses that the acid content of both fractions can be 0.8%, but can be lower or higher if desired by employing a NF membrane, which controls the acid permeability according to the desired result (col. 4, lines 56-64). The reference discloses combining juice streams from ultrafiltration and nanofiltration, which have had the sugar, removed (col.

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2, lines 49-55), col. 7, lines 16-20). Claims 1 -3 differ from the reference in the steps of cooling the juice to 45 F. and in deacidifying the solids reduced juice by contact with an ion-exchange resin. Lawhon et al. disclose that it is known that the aroma and flavor components in juices are easily volatilized at temperatures above 40 C. and that the acid content of juice can be reduced by passing it through an ion-exchange column (col. 1, lines 20-25 and col. 3, lines 23-30). Dechow et al. disclose that it is known to reduce the acid in juices using ion exchange and the treated product can be blended with untreated juice to make a blend (abstract). Also Puri discloses in the "background of the Invention" in Japanese Laid-Open Patent Application no. 18971, that it is known to filter insoluble solids from fruit juice to less than 0.5% and to treat with anion exchange resins to remove acid from the fruit juice then mixing with a nonacid fruit juice (col. 3, lines 16-40). Therefore, it would have been obvious to one of ordinary skill in the art to treat juice streams as shown by Black with ion exchange in place of NF because Lawhon et al. disclose that it is known to pass UF permeates or retentates through an ion-exchange column, and Dechow and Puri disclose that it is well known to treat juices with ion-exchange.

Claim 4 further requires that the both portions of the juice should be pasteurized with reduction of active enzymes in same portion or both portions. Lawhon et al. disclose that it is known that pasteurization can be used to destroy spoilage microorganisms, which can result in undesirable off flavors and odors. The product can be heated to 62 C. Nothing is seen that enzymes cannot also be deactivated at this temperature. Deactivation would also depend on the temperature and the time at that

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temperature. Therefore, it would have been obvious to pasteurize in the process of the combined references to reduce microorganisms and enzymes.

Claim 6 requires that the suspended solids should be reduced to less than 2 % and claim 7, 1% and claim 8 that particular methods of separating are claimed. The JP no. 18971 discloses that the insoluble solids (suspended solids) should be reduced to 0.5% before treating with anion exchange resins and can be separated by centrifugation (col. 3, lines 17-30). Therefore, it would have been obvious to remove the solids to the claimed degree using centrifugation before further treatment in the process of the combined references.

Claims 9 –12 further require adding an initial single strength juice to the deacidified juice lowers the pH from 4.5 to 4.3. Lawhon et al. disclose that it is known to provide whatever acid reduction is desired, and that a reduced-acid RO retentate can be mixed in different ratios with normal acid RO retentate for use in juice reconstitution (col. 11, lines 10-17). Various pH's are given in the Table 10 including those below 4.5. Therefore, it would have been obvious to combine the juices to make a product within the claimed range in the process of the combined references.

Claim 13 further requires that various portions of the juice be recombined. Lawhon et al. disclose that various retentates can be mixed to give various characteristics such as Brix/titratable acid ratios with a range desired (col. 15, lines 1-6). Therefore, it would have been obvious to use various amounts of juice streams to make the claimed product.

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Claims 14 –21 further requires the use of citrus juice which has been disclosed and claims 22-32 require a not from concentrate juice, claim 33 requires a single strength juice or a NFC juice, and claim 34 a NFC juice, whose limitations have been disclosed above in the combined references and are obvious for those reasons.

Claims 36-40 are product by process claims. The fact that the procedures of the reference are different than that of applicant is not a sufficient reason for allowing the product-by-process claims since the patentability of such claims is based upon the product formed and not the method by which it was produced. See *In re Thorpe* 227 USPQ 964. The burden is upon applicant to submit objective evidence to support their position as to the product-by-process claims. See *Ex parte Jungfer* 18 USPQ 2D 1796. The further limitations as to titratable acidity (TA) is shown by Lawhon et al. in particularly, in Table 10, Run C. Other TA's which are close to the claimed TA are found in Runs D and F. Therefore, it would have been obvious to make a product with the claimed TA.

Claims 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over the above combined references as applied to claims 1-35 above, and further in view of Norman et al. (4,666,721).

Norman et al. disclose a reduced acid juice from orange juice as in claims 36-40. Even though a different method is disclosed of making the juice, it is reduced in acid (abstract and (col. 2, lines 1-5 and col. 5, lines 40-50). Claim 36 differs from the reference in the particular TA. However, as acids have been removed from the juice, it would have been within the skill of the ordinary worker to reduce to a particular TA

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depending on the juice and the taste required. The further limitations of the claims have been discussed above. Therefore, it would have been obvious to reduce the acidity of a composition to a particular TA to make the claimed product, particularly as the claimed TA is disclosed in the above combined references.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen F. Pratt whose telephone number is 703-308-1978. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Milton Cano, can be reached on (703) 308-3959. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

Hp 9-15-03


HELEN PRATT
PRIMARY EXAMINER